BROADBAND PLANAR INVERTED F ANTENNA

ABSTRACT OF THE DISCLOSURE

A mono-band planar inverted F antenna (PIFA) structure comprises a planar radiating element having a first area, and a ground plane having a second area that is substantially parallel to the radiating element first area. An electrically conductive first line is coupled to the radiating element at a first contact located at an edge on a side of the radiating element. The first line is also coupled to the ground plane. An electrically conductive second line is coupled to the radiating element at second and third contacts located along the same side as the first line, but at different locations on the edge than the first contact. Useable bandwidth of the PIFA is increased by using multiple contact locations to couple the conductive second line to the radiating element. The first and second lines are adapted to couple to a desired impedance, e.g., 50 ohms, at frequencies of operation of the PIFA.